CLAIMS

What is claimed is:

1. A method for transmitting packet headers in a network adapter across a network comprising:

storing in a host memory protocol headers and application data into packet buffers;

storing in a cache on the network adapter a MAC header; and

transmitting the stored packet buffers and stored MAC header across a network.

2. The method as recited in claim 1 further comprising:

storing in the host memory a tag indicating a location of the MAC header in the cache;

retrieving the tag; and

accessing the stored MAC header at the location indicated by the tag when transmitting the MAC header across the network.

3. The method as recited in claim 1 further comprising:

storing the protocol headers and application data in a host memory on a personal computer; and

passing the stored protocol headers and application data to the network adapter using a direct memory access controller that retrieves data and headers from the host memory and writes the retrieved data in the network adapter.

4. The method as recited in claim 3 further comprising:

determining if the MAC header is different from to a MAC header previously transmitted; and

storing the MAC header in the host memory if the MAC header is different from the MAC header previously transmitted.

5. The method as recited in claim 4 further comprising, passing the MAC header in host memory using the direct memory access controller and writing the retrieved MAC header in the network adapter.

6. The method as recited in claim 1 further comprising receiving the protocol headers, application data and MAC header from an operating system.

7. The method as recited in claim 3 further comprising:

storing the MAC header into cache on the network adapter using a processor writing the MAC header over a personal computer bus into cache located on the network adapter card; and

passing the protocol headers and application data using a direct memory access controller located on the personal computer bus.

8. A computer system transmitting packet headers across a network comprising:

a processor having a host memory to store protocol headers and application data into packet buffers;

a network adapter having a local cache to store a MAC header;

a DMA controller operative to pass data from the host memory to said network adapter; and

said network adapter being operative to transmit both the stored packet buffers passed by the DMA controller and the MAC header stored in the local cache across a network.

9. The computer system as recited in claim 8 wherein said processor is operative to store in the host memory a tag indicating a location of the MAC header in the cache and operative to retrieve the tag from host memory and pass the tag to the network adapter; and wherein said network adapter is responsive to the tag being passed by the processor to access the stored MAC header at the location indicated by the tag when transmitting the MAC header across a network.

10. The computer system as recited in claim 9 further comprising:

a personal computer having a host memory to store the protocol headers and application data; and

a direct memory access controller to pass the host memory protocol headers and application data to the network adapter from the host memory and to write the retrieved data in the network adapter.

11. An article comprising:

a storage medium having a plurality of instructions, which when executed by a processor, cause transmission of packets by:

storing in a host memory protocol headers and application data into packet buffers;

storing in a cache on the network adapter a MAC header; and

transmitting the stored packet buffers and stored MAC header across a network.

12. The article as recited in claim 11 further comprising instructions to store in the host memory a tag indicating a location of the MAC header in the cache; retrieve the tag; and access the stored MAC header at the location indicated by the tag when transmitting the MAC header across a network.

13. The article as recited in claim 11 further comprising instructions to:

store the protocol headers and application data in a host memory on a personal computer; and

pass the host memory protocol headers and application data to the network adapter using direct memory access controller that retrieves data and headers from the host memory and writes the retrieved data in the network adapter.

14. The article as recited in claim 13 further comprising instructions to:

determine if the MAC header is different from to the MAC header previously transmitted; and

store the MAC header in the host memory if the MAC header is different from the MAC header previously transmitted.

15. The article as recited in claim 14 further comprising instructions to pass the MAC header in host memory using the direct memory access controller and to write the retrieved MAC header in the network adapter.

16. The article as recited in claim 11 further comprising instructions to receive the protocol headers, application data and MAC header from an operating system.

17. The article as recited in claim 13 further comprising instructions to:

store the MAC header into cache on the network adapter using a processor writing the MAC header over a personal computer bus into cache located on the network adapter card; and

pass the protocol headers and application data using a direct memory access controller located on the personal computer bus.

18. A computer system for transmitting packet headers across a network comprising:

processor means having a host memory to store protocol headers and application data into packet buffers;

adapter means having a local cache for storing a MAC header;

DMA controller means for passing data from the host memory to said network adapter; and

said network adapter having means for transmitting both the stored packet buffers passed by the DMA controller and the MAC header stored in the local cache across a network.

19. The computer system as recited in claim 18 further comprising:

said processor having means for storing in the host memory a tag indicating a location of the MAC header in the cache and for retrieving the tag from host memory and for passing the tag to the network adapter; and

said adapter means being responsive to the tag being passed by the processor means and having means to access the stored MAC header at the location indicated by the tag when transmitting the MAC header across a network.

20. The computer system as recited in claim 19 further comprising:

a PC means having a host memory for storing the protocol headers and application data; and

a DMA means for passing the host memory protocol headers and application data to the network adapter from the host memory and for writing the retrieved data in the network adapter.

21. An adapter apparatus for transmitting packet headers, stored in a host memory of a computer as a protocol header and application data, across a network comprising:

a network controller having a cache to store a MAC header, said network controller transmitting the stored packet buffers and stored MAC header across a network.

22. The adapter apparatus as recited in claim 21 wherein said network controller retrieves a tag from host memory, wherein the tag indicates the location of the MAC header in cache; and wherein said network controller accesses the stored MAC header at the location indicated by the tag to transmit the MAC header across the network.

23. The adapter apparatus as recited in claim 21 further comprising a direct memory access controller to retrieve the host memory protocol headers and application data and to write the retrieved data in the network adapter.

24. The adapter apparatus as recited in claim 23 wherein the network controller determines if the MAC header is different from the MAC header previously transmitted and stores the MAC header in the host memory if the MAC header is different from the MAC header previously transmitted.